

A DICTIONARY OF PETROLEUM TERMS

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injection pattern—Instituto Mexicano del Petróleo

an injection well. The injection log is also used to check for casing or packer leaks, bad cement jobs, and fluid migration between zones.

injection pattern *n*: the spacing and pattern of wells in a secondary recovery or pressure-maintenance project, determined from the location of existing wells, type of offset operations used, reservoir size and shape, and cost of drilling new wells. Common injection patterns include line drive, five spot, seven spot, nine spot, and peripheral.

injection pump *n*: a chemical feed pump that injects chemical reagents into a flow-line system to treat emulsions, at a rate proportional to that of the flow of the well fluid. Operating power may come from electric motors or from linkage with the walking beam of a pumping well.

injection well *n*: a well in which fluids have been injected into an underground stratum to increase reservoir pressure.

inland barge rig *n*: a drilling structure consisting of a barge upon which the drilling equipment is constructed. When moved from one location to another, the barge floats, but, when stationed on the drill site, the barge is submerged to rest on the bottom. Typically, inland barge rigs are used to drill wells in marshes, shallow inland bays, and areas where the water covering the drill site is not too deep.

inlet manifold *n*: the passage that leads from the air filter to the cylinders of an engine. In a diesel engine, air only is introduced on the intake stroke.

innage *n*: the height of a liquid in a tank as measured from the bottom (datum plate) of the tank to the liquid surface.

innage gauge *n*: a measure of the liquid in a tank from the bottom of the tank to the surface of the liquid.

inorganic compounds *n pl*: chemical compounds that do not contain carbon as the principal element (excepting that in the form of carbonates, cyanides, and cyanates). Such compounds make up matter that is not plant or animal.

input shaft *n*: the transmission shaft for the drawworks that is driven directly by the compounding transmission on a mechanical-drive rig and is connected to it with the master clutch; or, on an electric-drive rig, the shaft driven directly by the electric motors. The input shaft drives the jackshaft or output shaft.

input well *n*: an injection well, used for injecting

fluids into an underground stratum to increase reservoir pressure.

in./sec *abbr*: inches per second.

insert *n*: 1. a cylindrical object, rounded or chisel-shaped on one end and usually made of tungsten carbide, that is inserted in the cones of a bit, the cutters of a reamer, or the blades of a stabilizer to form the cutting element of the bit or the reamer or the wear surface of the stabilizer. Also called a compact. 2. a removable part molded to be set into the opening of the master bushing so that various sizes of slips may be accommodated. Also called a bowl.

insert pump *n*: a sucker rod pump that is run into the well as a complete unit. See *sucker rod pump*.

inside blowout preventer *n*: a valve installed in the drill stem to prevent a blowout through the stem. Flow is thus possible downward only, allowing mud to be pumped in but preventing any flow back up the stem. Also called an internal blowout preventer.

inside cutter *n*: See *internal cutter*.

inside diameter *n*: distance across the interior circle, especially in the measurement of pipe. See *diameter*.

in situ combustion *n*: a method of enhanced oil recovery in which heat is generated within the reservoir by injecting air and burning a portion of the oil in place. The heat of initial combustion cracks the crude hydrocarbons, vaporizes the lighter hydrocarbons, and deposits the heavier hydrocarbons as coke. As the fire moves from the injection well in the direction of producing wells, it burns the deposited coke, releases hot combustion gases, and converts connate water into steam. The vaporized hydrocarbons and the steam move ahead of the combustion zone, condensing into liquids as they cool and moving oil by miscible displacement and hot waterflooding. Combustion gases provide additional gas drive. Heat lowers the viscosity of the oil, causing it to flow more freely. This method is used to recover heavy, viscous oil. Also called fire flooding.

Instituto Mexicano del Petróleo (Mexican Petroleum Institute) *n*: a decentralized public-interest body created by the Mexican government. The main objective of the Instituto Mexicano del Petróleo is to carry out research and technological development as required by the petroleum, petrochemical, and chemical industries; to provide technical services for those industries; and to train personnel involved with the Mexican petroleum industry. The main offices of the Instituto Mexicano del Petróleo are located in México, D.F.